REMARKS

Claims 1, 4-16, 18-24 and 26-30 remain pending in the application, claims 2, 3, 17 and 25 being canceled herein.

Claims 1-10

In the Office Action, claims 1 and 3-5 were rejected under 35 USC 102(b) as allegedly being anticipated by U.S. Pat. No. 5,157,395 to Del Signore et al. ("Del Signore"); claim 2 was rejected under 35 USC 103(a) as allegedly being obvious over Del Signore in view of U.S. Pat. No. 6,389,069 to Mathe ("Mathe"); and claims 6-10 were rejected under 35 USC 103(a) as allegedly being obvious over Del Signore in view of U.S. Pat. No. 6,438,162 to Boyd et al. ("Boyd"). Claims 2 and 3 are canceled herein, making the rejection in that regard now moot. Otherwise, the Applicants respectfully traverse the rejections.

Claims 1 and 4-10 are amended herein to recite an adaptive **equalizer** comprising programmable infinite impulse response (**IIR**) filter, a filter selector to select fro ma plurality of **IIR** filter transfer functions, and a finite impulse response (**FIR**) filter.

The Examiner cites Del Signore, in particular element 14 of Figs. 1, 2 as being a first programmable filter. Claims 1 and 3-10 are amended herein to include the subject matter of canceled claim 2, thereby distinguishing from either Del Signore alone, or the alleged combination of Del Signore and Boyd, based on the Examiner's rejection on its face.

With respect to the current subject matter, the rejection of claim 2 in view of Del Signore and Mathe will be discussed.

In particular, Del Signore teaches in Fig. 2 a first, FIXED, FIR1 DECIMATION filter 12, a plurality of FIXED secondary DECIMATION filters 2a-2d, and a FIXED, third decimation filter 16.

ALL filters in Del Signore are FIR filters, and NONE of the filters in Del Signore form an equalization filter. Claims 1 and 4-10 require not one but BOTH of these important features. To allegedly cure this serious deficiency, the Examiner cites Mathe.

Mathe teaches the use of an FIR Jammer, followed by a FIXED IIR

equalization filter, followed by an FIR equalization filter.

It is absolutely unclear as to how or why someone in the art of equalization filters would have looked to combine Del Signore with Mathe, as one relates to a decimation filter (Del Signore) while the other relates to a digital filter (Mathe). Thus, it is respectfully submitted that the combination is improper. Nevertheless, even if combined, the result would STILL not result in the present invention of claims 1 and 4-10.

In particular, fairly combined, one would look to somehow improve/replace a decimation filter in Del Signore's disclosure with a better decimation filter from Mathe. Of course, there IS no decimation filter in Mathe. Thus, presumably the filters would follow in series such that we either have the FIR, FIXED IIR, FIR of Mathe followed by the FIR1, FIR2a-d, FIR3 of Del Signore, or the reverse. There is no teaching in EITHER Del Signore or Mathe to do as the Examiner might suggest: to REPLACE each of the FIXED decimation filters FIR2a-2d with a plurality of IIR equalization filters 18 drawn from Mathe. Why would one replace a decimation filter with an equalization filter? They wouldn't as they are completely different animals serving completely different uses.

For at least all the above reasons, claims 1 and 4-10 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

Claims 14-30

Claims 14-17, 20-25 and 27-30 were rejected under 35 USC 103(a) as allegedly being obvious over U.S. Pat. No. 5,915,235 to De Jaco et al. ("De Jaco") in view of U.S. Pat. No. 6,195,414 to Simmons et al. ("Simmons"); and claims 18, 19 and 26 were rejected under 35 USC 103(a) as allegedly being obvious over De Jaco in view of Simmons and Del Signore. Claims 17 and 25 are canceled herein, thereby mooting the rejection in that regard. Otherwise, the Applicant respectfully traverses the rejections.

Claims 14-16, 20-24 and 27-30 are amended herein to include the subject matter of canceled claim 17. Claims 14-16, 20-24 and 27-30 recite firstly

filtering using an **IIR** digital filter, and then adaptively adjusting an output of the **IIR** digital filter to accurately match an inverse response of a transmission channel for T1/E1 data.

The Examiner cites De Jaco, Fig. 4, element 20 as allegedly disclosing "firstly filtering". Claims 14-16, 20-24 and 27-30 are amended herein to more distinctly recite that the firstly filtering uses an **IIR** filter, and that the output of the **IIR** filter is adaptively adjusted.

De Jaco clearly teaches that the Whitening filter 20, cited by the Examiner, is a ten tap linear predictive coefficient (LPC) filter. (De Jaco, col. 4, lines 3-5). To cure this serious deficiency, the Examiner cited Simmons in rejection of original claim 17 (no presumably pertinent to claims 14-16, 18-24 and 27-30).

In particular, the Examiner cites Simmons for allegedly teaching a received T1/E1 signal. (Office Action at 6) Nevertheless, neither De Jaco nor Simmons discloses, teaches or suggests filtering using an **IIR** filter, and then adaptively adjusting an output of the **IIR** filter as recited by claims 14-16, 20-24 and 27-30.

For at least all the above reasons, claims 14-16, 18-24 and 27-30 are patentable over the prior art of record. It is therefore respectfully requested that the rejections be withdrawn.

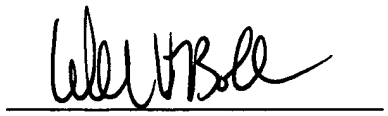
Claims 11-13

The Applicants note that although claims 11-13 are indicated on the front page of the Office Action as having been rejected, no support for such rejection was found in the Office Action. Accordingly, should the Examiner continue to reject any claims in the application, such rejection should not properly be made final as Applicants should be given a non-final chance to respond to the rejection of claims 11-13.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,



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